

### Abstract

A novel highly bright mechanoluminescence material free from decay of luminescence brightness even if repeated stress is applied, comprising a composite semiconductor crystal of the general formula  $xM^1A^1 \cdot (1-x)M^2A^2$  (wherein each of  $M^1$  and  $M^2$  independently represents an atom selected from among Zn, Mn, Cd, Cu, Eu, Fe, Co, Ni, Mg and Ca, and each of  $A^1$  and  $A^2$  is an atom independently selected from among chalcogens, provided that  $M^1A^1$  is different from  $M^2A^2$ ; and  $x$  is a positive number less than 1); and a process for producing the same.